DOCUMENT RESUME

ED 303 174 IR 052 624

AUTHOR Evans, Joanna, Comp.; Carter, Constance, Comp.
TITLE Optical Disk Technology. A Brief Guide to Materials in the Library of Congress. LC Science Tracer Bullet.
INSTITUTION Library of Congress, Washington, D.C.
REPORT NO TB-87-12
PUB DATE Nov 87
NOTE 11p.
PUB TYPE Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Computer Science; Guides; Information Retrieval; *Information Sources; Information Storage; Library Guides; *Optical Data Disks; Periodicals; Preservation; *Reference Materials; Research Reports; Technological Advancement; Textbooks; User Needs (Information)
IDENTIFIERS *Library of Congress

ABSTRACT

This guide to materials on optical disks is designed to aid an individual in pursuing the study of optical disk technology through a review of the literature in the collections of the Library of Congress. A brief explanation of the scope of the topic introduces the references, which are listed in the following categories: (1) introductions to optical disk technology; (2) subject headings; (3) basic texts; (4) additional titles; (5) directories and guides; (6) bibliographies; (7) conference proceedings; (8) reports on the Library of Congress Optical Disk Pilot Project; (9) abstracting and indexing services; (10) journals; (11) selected representative articles; (12) indexes to reports; (13) selected technical reports; (14) selected vertical file materials; and (15) associations that can provide additional information. (CGD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED303174

LC Science Tracer Bullet

Science Reference Section, Science and Technology Division
Library of Congress, 10 First Street, S.E., Washington, D.C. 20540

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ISSN 0090-5232

OPTICAL DISK TECHNOLOGY
A Brief Guide to Materials in the Library of Congress

Compiled by Joanna Evans & Constance Carter

TB 87-12 November 1987

SCOPE: Optical disks are assuming a significant role in information storage and retrieval in the 1980's. Additionally, they have some potential for the preservation of knowledge for generations to come. From write-once disks and read-only memory to erasable disks, the technology is now being applied more widely in libraries, businesses, and educational institutions. Because optical disk storage systems hold the promise of providing high-density storage inexpensively, managers are investigating this technology as an economical means for storing and preserving records. Optical disk systems permit mass storage of images--both analog and digital--which can be coupled with the organizing and retrieving power of a computer. A single disk, for instance, could contain the text of a publication as massive as the Encyclopaedia Britannica.

This compilation lists sources to aid an individual in pursuing the study of optical disk technology through a review of the literature in the collections of the Library of Congress. Not intended to be a comprehensive bibliography, this Tracer Bullet is designed--as the name of the series implies--to put the reader "on target."

INTRODUCTIONS TO THE TOPIC

All about optical disks. Datapro 70, v. 2, Apr. 1987: 70D6-001LH-101--70D6--001LH-111. Computer shelf*
For latest update, see Datapro 70 notebooks in Science Reading Room.

Manns, Basil, and Tamara Swora. Books to bits: digital imaging at the Library of Congress. Journal of information and image management, v. 19, Oct. 1986: 26-32. TR835.J67

Optical videodisk and optical digital storage disk systems. In Handbook of information technology and office systems. Edited by A. E. Cawkell. Amsterdam, New York, North-Holland; sole distributors for the U.S.A. and Canada, Elsevier Science Pub. Co., 1986. p. 126-131. QA76.H2784 1986*

*Available in the reference collection, Science Reading Room

IR052624

BEST COPY AVAILABLE

SUBJECT HEADINGS used by the Library of Congress, under which books on optical disk technology can be located in most card, book, and online catalogs, include the following:

OPTICAL DISKS (Highly relevant)
OPTICAL STORAGE DEVICES (Highly relevant)
OPTICAL STORAGE DEVICE INDUSTRY (Highly relevant)
VIDEO DISCS (Highly relevant)
CD-ROM (Relevant)
COMPACT DISCS (Relevant)
COMPUTER STORAGE DEVICES (Relevant)
LASER RECORDING (Relevant)
OPTICAL DATA PROCESSING (Relevant)

BASIC TEXTS

Barrett, Raymond. Further developments in optical disc technology and applications. Boston Spa, Wetherby, West Yorkshire, British Library; distributed by Publications Section, British Library Lending Division, c1984. 35 p. (Library and information research report, 27) TA1635.B37 1984

Bouwhuis, G., and others. Principles of optical disc systems. Bristol, Boston, A. Hilger, c1985. 277 p. TK7895.M4P75 1985

Essential guide to CD-ROM. Edited by Judith Paris Roth. Westport, Conn., Meckler Pub., c1986. 189 p. + ca. 8800 program files on 1 computer laser optical disk (4 3/4 in.)
TK7895.M4E77 1986 Rare Bk Spec Format
System requirements for disk in pocket: RTI series 500 CD-ROM DataDrive.
Bibliography: p. 167-173.

Isailovic, Jordan. Videodisc systems: theory and applications. Englewood Cliffs, N.J., Prentice-Hall, c1987. 451 p.
TK6685.I83 1985

McQueen, Judy, and Richard W. Boss. Videodisc and optical digital disk technologies and their applications in libraries: 1986 update. Chicago, American Library Association, c1986. 155 p.
Z681.3.V53M36 1986

Saffady, William. Optical disks for data and document storage. Westport, Conn., Meckler Pub., c1986. 94 p. TK7895.M4S243 1986
Bibliography: p. 79-89.

ADDITIONAL TITLES

CD ROM: the new papyrus: the current and future state of the art. Foreword by William H. Gates. Edited by Steve Lambert and Suzanne Ropiequet. Redmond, Wash., Microsoft Press, c1986. 619 p.
TK7882.C56N49 1986
"A compilation of articles written by people who have recognized the potential of CD ROM and have become involved in the new technology."

CD ROM markets. Norwalk, Conn., International Resource Development, Inc., c1986. 201 p. (International Resource Development, Inc. Report, 697) HD9696.0673U627 1986

A Competitive assessment of the United States disk storage industry. Washington, U.S. Dept. of Commerce, International Trade Administration, U.S. Govt. Print. Off., 1985. 55 p. HD9696.C63U514936 1985

Hendley, A. M. The archival storage potential of microfilm, magnetic media, and optical data discs: a comparison based on a literature review. Conducted by A. M. Hendley on behalf of the British Library BNB Research Fund. Bayfordbury, Hertford, NRCd, Hatfield Polytechnic, 1983. 77 p. (NRCd publication, no. 19) (BNB Research Fund report, no. 10) Z681.3.M53H46 1983

Optical discs for storage and access in ARL libraries. Washington, Office of Management Studies, Association of Research Libraries, 1987. 111 [i.e. 133] p. (Systems and Procedures Exchange Center. Kit #133) Pamphlet box*

"Kit provides a sample of excerpts from technical and planning documents contributed by several ARL members which are planning to install or have already implemented optical disc technology."

Optical disk technology and the library. Ottawa, National Library of Canada, 1985. 51, 55 p. (Canadian network papers, no. 9) Z681.3.O67O68 1985

Text in English and French with French text on inverted pages.

Contents: Pt. 1. The technology and its applications, by Roddy Duchesne.--Pt. 2. The National Library videodisc demonstration project, by Sabine S. Sonnemann.

Title on added t.p.: Technologie du vidéodisque et la bibliothèque.

Saffady, William. Optical storage technology, 1987: a state of the art review. Westport, Conn., Meckler Pub., 1987. 117 p.

Bibliography: p. 85-104. TA1635.S24 1987

DIRECTORIES AND GUIDES

AIIM buying guide: the official registry of information and image management products and services. 1985- Silver Spring, Md., Association for Information and Image Management. HD9999.M47A39

Title changed in 1987 to Information management source book: the AIIM buying guide and membership directory.

The CD-ROM sourcebook. Linda W. Helgerson, Martin G. Ennis, editors. Falls Church, Va., Diversified Data Resources, Inc., c1986. 1 v. (unpaged) Computer shelf*

Loose-leaf.

Datapro reports on office automation. 1984- Delran, N.J., Datapro Research Corporation. Computer shelf*

See particularly "Optical disc storage technology" in v. 1.

Micrographics equipment review. 1976- Westport, Conn., Microform Review, Inc. TR835.M497a

The Optical memory report. 1984 ed.- San Francisco, Rothchild Consultants. TK7895.M40686*

Who's who in optical memories and interactive videodisks. 1983- San Francisco, Calif., Rothchild Consultants. TA1635.W48

BIBLIOGRAPHIES

Fischer, Audrey. Optical and videodisk technology: a review of the literature on optical disk and videodisk technology, 1985-mid 1986. In Library hi tech bibliography. v. 2. Ann Arbor, Mich., Pierian Press, 1987. p. 105-112. (LHT bibliography, no. 12) Z666.L43 and Pamphlet box*

Goldstein, Charles M. Computer-based information storage technologies. In Annual review of information science and technology. v. 19. White Plains, N.Y., Knowledge Industry Publications, Inc., 1984. p. 65-96. Z699.A1A65*

Kobelski, Pamela G. Optical disk storage technology: a bibliography. Monticello, Ill., Vance Bibliographies, 1983. 12 p. (Public administration series: bibliography, P-1320) Z5838.068K62 1983 and Pamphlet box*

Park, James R. A bibliography of the literature on optical storage technology. Washington, U.S. Dept. of Commerce, National Bureau of Standards; for sale by the Supt. of Docs., U.S. Govt. Print. Off., 1983. 174 p. (NBS special publication, 500-107) QC100.U57 no. 500-107 and Pamphlet box*

Swora, Tamara. Optical digital scanning and storage technology: write-once and erasable media. In Library hi tech bibliography. v. 2. Ann Arbor, Mich., Pierian Press, 1987. p. 113-121. (LHT bibliography, no. 13) Z666.L43 and Pamphlet box*

Swora, Tamara, and Audrey Fischer. Technical services in 1984 and 1985: micrographics, optical disk technology, and fair use. Library resources & technical services, v. 30, July/Sept. 1986: 183-217. Z671.L7145 and Pamphlet box*

See particularly "Optical disk and related technologies": p. 194-208.

CONFERENCE PROCEEDINGS

Applications of optical digital data disk storage systems. W. Mike Deese, Marino Carasso, chairmen/editors. Bellingham, Wash., SPIE--the International Society for Optical Engineering, c1984. 111 p. (Proceedings of SPIE--the International Society for Optical Engineering, v. 490) TA1635.A66 1984

IEEE Symposium on Mass Storage Systems (7th, 1985, Tucson, Ariz.). Digest of papers: Seventh IEEE Symposium on Mass Storage Systems: toward automated mass storage systems, November 4-7, 1985, Doubletree Hotel, Tucson, Arizona. Karen Friedman, editor. Sponsored by the IEEE Computer Society. Washington, IEEE Computer Society Press, Los Angeles, Calif., c1985. 99 p. TK7895.M4I35 1985

International Conference on Optical Mass Data Storage (3rd, 1985, Los Angeles, Calif.). Third International Conference on Optical Mass Data Storage, January 22-24, 1985, Los Angeles, California. Robert A. Sprague, chairman/editor. Bellingham, Wash., SPIE--the International Society for Optical Engineering, c1985. 248 p. (Proceedings of SPIE--the International Society for Optical Engineering, v. 529) TK7895.M4I574 1985

Laser scanning and recording [proceedings] August 21-22, 1984, San Diego, California. Leo Beiser, chairman/editor. Cooperating organizations, Environmental Research Institute of Michigan ... and others. Bellingham, Wash., SPIE--the International Society for Optical Engineering, c1984. 213 p. (Proceedings of SPIE---the International Society for Optical Engineering, v. 498) TK7882.S3L35 1984

Optical Information Systems '86 (1986, Arlington, Va.). Optical Information Systems '86: December 9-11, 1986, Hyatt Regency Crystal City, Arlington, Virginia. Compiled by Judith Paris Roth. Westport, Conn., Meckler Pub., c1986. 299 p. TA1635.O665 1986
Cover title: OIS 1986, conference proceedings.

Selected papers on laser scanning and recording. Leo Beiser, editor. Bellingham, Wash., SPIE--the International Society for Optical Engineering, c1985. 494 p. (Proceedings of SPIE--the International Society for Optical Engineering, v. 378) TK7882.S3S45 1985

LIBRARY OF CONGRESS OPTICAL DISK PILOT PROJECT

Fischer, Audrey, and Tamara Swora. Library of Congress Optical Disk Pilot Program, Optical Disk Print Pilot Project: print project document preparation and input report, phase I, September 1984-December 1985. Washington, The Library, 1986. 73 p. Z681.3.O67F57 1986

Fleischhauer, Carl. A report on the optical disk pilot program: the non-print project. Library of Congress information bulletin, v. 44, Nov. 11, 1985: 335-339. Pamphlet box*

Krayeski, Felix. Image processing and optical disk technology at the Library of Congress Research Service. Optical information systems, v. 6, Mar./Apr. 1986: 120-122. Pamphlet box*

LC pilot program selected bibliography. National preservation news: a newsletter of the National Preservation Program Office, the Library of Congress, no. 7, May 1987: 14-15. Pamphlet box* and Z701.N29

Library is host to standards meeting on optical disk technology. Library of Congress information bulletin, v. 44, July 15, 1985: 177-178. Pamphlet box*

Nofel, Peter J. 40 million hits on optical disk. Modern office technology, v. 31, Mar. 1986: 85, 86, 88. Pamphlet box*

Parker, Elizabeth Betz. The Library of Congress non-print optical disk pilot program. Information technology and libraries, v. 4, Dec. 1985: 289-299. Pamphlet box*

Price, Joseph W. The Library of Congress use of microcomputers in the Optical Disk Pilot Program. Microcomputers for information management, v. 2, Dec. 1985: 241-250. Pamphlet box*

----- The optical disk pilot program at the Library of Congress. Videodisc and optical disk, v. 4, Nov./Dec. 1984: 424-432. Pamphlet box*

----- Optical disks and demand printing research at the Library of Congress. Information services and use, v. 5, Feb. 1985: 3-20. Pamphlet box*

Reich, Victoria Ann, and Melissa Ann Betcher. Library of Congress staff test optical disk system. College & research libraries, v. 47, July 1986: 385-390. Pamphlet box*

Testing the disk: predictions of longevity. National preservation news: a newsletter of the National Preservation Program Office, the Library of Congress, no. 3, Jan. 1986: 11-13. Z701.N29

ABSTRACTING AND INDEXING SERVICES that index relevant journal articles and other literature are listed below. Some suggested terms are given as aids in searching.

ACM Guide to Computing Literature (1977-) QA75.5.A75a*
See: Optical

Applied Science & Technology Index (1913-) Z7913.I7*
See: Erasable Optical Memories
Optical Storage Devices
Read Only Optical Memories
Write Only Optical Memories

Computer & Control Abstracts (Science Abstracts--Series C) (1966-) QA76.C548*
See: Optical Disc Storage
Video and Audio Discs

Note: Consult reference librarian for location of abstracting and indexing services in the Science Reading Room.

Computer and Information Systems Abstracts Journal (1962-) QA76.I46*
See: Optical Storage

General Science Index (1978-) Z7401.G46*
See: Optical Storage Devices
Image Processing

Magazine Index (1983-) Available on film/ROM reader
See: CD-Interactive
CD-ROM
Optical Disks
Optical Storage Devices
Laser Recording
Video Disks

Microcomputer Index (1980-) QA75.5.M5*
See: Optical Disk

Readers' Guide to Periodical Literature (1900-) AI3.R45
See: CD-ROM (Compact Disc-Read Only Memory)
Optical Storage Devices

JOURNALS that often contain articles on optical disk technology are

Byte QA76.5.B9
CD-ROM Review N&CPR
Datamation T175.M26
EDN (formerly Electrical Design News) TK1.E266
Electronics TK7800.E4384
IEEE Spectrum TK1.I15
International Journal of Micrographics & Video Technology Z265.I565
Journal of Information and Image Management TR835.J67
Library Hi Tech Z671.L699
Optical Information Systems (formerly Videodisc and Optical Disk) TK5105.V52

SELECTED REPRESENTATIVE ARTICLES

André, Pamela Q. J. Evaluating laser videodisc technology for the dissemination of agricultural information. Information technology and libraries, v. 4, June 1985: 139-147. Z678.9.A1I53

Desmarais, Norman. Information management on a compact silver disc. Optical information systems, v. 7, May/June 1987: 193-201. TK5105.V52

Hecht, Jeff. Optical data storage. A+, v. 4, Apr. 1986: 78-80, 82, 84, 85. QA76.8.A66A19

Helgerson, Linda. The business of OD^3: an overview of optical digital data disk technology. Videodisc and optical disk, v. 4, Nov./Dec. 1984: 433-459. TK5105.V52

Hill, Michael W. Patents on videodisc: a future system almost with us. International journal of micrographics & video technology, v. 4, no. 2, 1985: 69-75. Z265.I565

Laub, Leonard. The evolution of mass storage: an overview of the technology's beginnings, current status and potential development in the realm of microcomputers. Byte, v. 11, May 1986: 161-166, 168, 170-172. QA76.5.B9

Metzger, Norman, and Naomi J. Freundlich. Erasable optical discs. Popular science, v. 230, May 1987: 56-60, 101-102. AP2.P8

Newman, Donald J. Optical disk and micrographic document management systems: pros, cons, & draws. Journal of information and image management, v. 19, Sept. 1986: 15-17. TR835.J67

Slonin, Jacob, Dennis Nole, and Michael Bauer. Write-once laser disc technology. Library hi tech, v. 3, no. 4, 1985: 27-42. Z671.L699

Van Arsdale, William O. The rush to optical discs. Library journal, v. 111, Oct. 1, 1986: 53-55. Z671.L7

Van Horn, Royal. Laser videodiscs in education: endless possibilities. Phi delta kappan, v. 68, May 1987: 696-700. LJ121.P4

Walter, Gerry. Optical digital data disk technology for the management of engineering documents. Journal of information and image management, v. 18, Jan. 1985: 20-26. TR835.J67

REPORTS and other types of literature are indexed in the following guides:

Government Reports Announcements & Index (1946-) Z7916.G78*
See: Compact Disks
Optical Data Storage Materials
Optical Digital Discs
Optical Disks

Monthly Catalog of United States Government Publications (1895-) Z1223.A18*
See: Headings beginning Optical Data Processing
Optical Disk
Optical Storage Devices

SELECTED TECHNICAL REPORTS

Compact optical disk technology--CD ROM. Citations from the INSPEC data base, April 1979-1985. Springfield, Va., National Technical Information Service, Dec. 1985. 139 p. NOT IN LC COLLECTIONS
"PB86-853439."

Dommelen, J. V., and others. Characterization of optical non-erasable discs. Eindhoven, Neth., Optical Media Laboratories [Philips Gloeilampenfabrieken N.V.] 1983. [13] p. Pamphlet box*
"O.M.L. 1983-06-22."

Erasable optical disks. Citations from the INSPEC data base, 1975-January 1986. Springfield, Va., National Technical Information Service, January 1986. 55 p. NOT IN LC COLLECTIONS
"PB86-856408."

Kita, K., and J. Inoue. Diagnostic display system with optical disk storage for CT scanner images. Tokyo, Japan, Toshiba Corp., c1984. 6 p. TK105.T618
"Included in Toshiba Review, International edition, no. 148, 1984: 26-31."
"PB85-101517."

Markvoort, J., and others. Mechanical, environmental and accelerated ageing tests on OML disks. Eindhoven, Neth., Optical Media Laboratories [Philips Gloeilampenfabrieken N.V.] 1984. [4] p.
"AR90-593." Pamphlet box*

Optical disk technology assessment. Silver Spring, Md., Automated Services Group, Inc., June 1985. 126 p. AD-A157 909**

Peskin, A. M. Role of optical disk at computing centers. Upton, N.Y., Brookhaven National Laboratory, 1984. 7 p. BNL-35551**
"International Society for Optical Engineering meeting, Los Angeles, Calif., January 21, 1985."

Petruzelli, Jack D. Optical disk technology for large scale mass storage. Griffiss AFB, N.Y., Rome Air Development Center, Dec. 1985. 33 p. AD-A163 453**

Verhoeven, J. A. Th. Digital optical recording and data integrity. [Eindhoven, Neth., Optical Storage International, 198? 17 p.] Pamphlet box*

Wilkinson, E. A. Optical storage technology for mapping. Fort Belvoir, Va., Army Engineer Topographic Labs., 1985. 7 p. AD-A154 989**
"Presented at the 1985 ASP-ACSM convention, Washington, D.C."

SELECTED MATERIALS available in the Science Reading Room pamphlet boxes include:

Bairstow, Jeffrey. CD-ROM mass storage for the mass market. High technology, v. 6, Oct. 1986: 44-51.

Bridge, Raymond. Casting databases into plastic. CD-ROM review, v. 2, Dec. 1987: 26-30.

Caruso, Denise. Optical storage: hot item or a dud? Electronics, v. 58, Sept. 16, 1985: 26-29.

Cash, Joan. Spinning toward the future: the museum on laser videodisc. Museum news, v. 63, Aug. 1985: 19-35.

**Available in microform collection, Science Reading Room

Chen, Peter Pin-Shan. The compact disk ROM: how it works. IEEE spectrum, v. 23, Apr. 1986: 44-49.

Desmarais, Norman. Laser libraries. Byte, v. 11, May 1986: 235, 239, 241, 243-244, 246.

Fujitani, Larry. Laser optical disk: the coming revolution in on-line storage. Communications of the ACM, v. 27, June 1984: 546-554.

Helgerson, Linda W. Acquiring a CD-ROM public access catalog system. Pt. 1: The bottom line may not be the top priority. Library hi tech, v. 5, fall 1987: 49-75.

Herther, Nancy K. CD ROM technology: a new era for information storage and retrieval? Online, v. 9, Nov. 1985: 17-28.

Jones, Mark K. Interactive videodisc and the self-directed learner. Optical information systems, v. 7, Jan./Feb. 1987: 62-65.

Mansuripur, Masud. Magneto-optical disk systems. Applied optics, v. 26, Sept. 15, 1987: 3981-3986.

----- Optical disk data storage. The Physics teacher, v. 23, Oct. 1985: 408-412.

Ohr, Stephen. Magneto-optics combines erasability and high-storage density. Electronic design, v. 33, July 11, 1986: 93-98, 100.

Slonim, Jacob, Dennis Noble, and Michael Bauer. Write-once laser disc technology. Library hi tech, v. 3, no. 4, 1985: 27-42.

ADDITIONAL SOURCES OF INFORMATION

Association for Information and Image Management (AIIM)
1100 Wayne Avenue
Silver Spring, Maryland 20910
Telephone: (301) 587-8202

SPIE--The International Society for Optical Engineering
(Formerly the Society of Photo-Optical Engineering)
P.O. Box 10
Bellingham, Washington 98227-0010
Telephone: (206) 676-3290